

DOCKET NO. PHNL 000222 (PHIL06-00222)
SERIAL NO. 09/846,607
PATENT

REMARKS

Claims 1-20 are pending in this application.

Claims 1-4 and 6-20 have been rejected.

Claim 5 has been objected to.

Claims 1, 13 and 14 have been amended as shown above. Because these amendments place the claims in better condition for allowance or appeal and do not require a new search, these amendments comply with 37 C.F.R. § 1.116.

Claim 8 is hereby canceled without prejudice.

Claims 1-7 and 9-20 remain pending in the application

Reconsideration of Claims 1-7 and 9-20 is respectfully requested.

I. Amendments to the Specification

In the February 23, 2005, Office Action, under the heading "Specification," the Examiner notes that 37 C.F.R. 1.77(b) recites suggested sections for inclusion in the specification of a utility application and suggests section headings for the sections. The Applicant respectfully notes that the use of headings is preferred but not required under 37 C.F.R. 1.77(b). As a result, the Applicant respectfully declines to add section headings to the specification.

In section 2 of the Office Action, the Examiner objected to the abstract of the disclosure because it was not a single paragraph. The Applicants have amended the abstract to remove the second paragraph, consisting of the phrase "Fig. 1B," and respectfully request the withdrawal of the objection.

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II. 35 U.S.C. § 112 - Indefiniteness

In Sections 3 and 4 of the February 23, 2005, Office Action, the Examiner rejected Claim 13 under 35 U.S.C. 112, second paragraph, for reciting a limitation with insufficient antecedent basis in the claim. In response, the Applicants have amended Claim 13 to provide sufficient antecedent basis for the limitation "said different light emission wavelengths." The Applicants respectfully request withdrawal of the rejection of Claim 13.

III. 35 U.S.C. § 102 - Anticipation

In Sections 5 and 6 of the February 23, 2005, Office Action, the Examiner rejected Claims 1-4, 8-10, 13, 14 and 18 under 35 U.S.C. § 102(e) as being anticipated by United States Patent No. 6,281,949 to Matsui, *et al.* ("*Matsui*"). The Applicants respectfully traverse this rejection.

A cited prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single cited prior art reference. MPEP § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

The Applicants have amended independent Claim 1 to recite the limitations formerly recited in Claim 8. In rejecting Claim 8, the Examiner asserted "Matsui clearly teaches the intensity of light emitted by the light-emitting diodes varies in response to an illumination level of the picture to be displayed by the display device," citing the *Matsui* reference at column 18,

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lines 4-8 and 50-65. *February 13, 2005, Office Action, page 6, last paragraph.* The Applicants respectfully submit that the Examiner has mischaracterized the teaching of the *Matsui* reference.

In Figure 18 and column 17, lines 49-65, the *Matsui* reference describes a "digital gradation display system." A picture with pixels having one of sixteen brightness levels may be reproduced by four bi-level pictures in which each pixel is either on or off. In the first bi-level picture, the "on" pixels have a brightness level of 8; in the subsequent three bi-level pictures, the "on" pixels have brightness levels of 4, 2 and 1, respectively. In a single frame period, all four bi-level pictures are displayed by the picture display light valve, with the result that an observer's eye perceives pixels having one of sixteen brightness levels.

In the paragraph beginning at column 17, line 66, the *Matsui* reference describes two techniques for producing the four brightness levels used in the bi-level pictures. In the "pulse width modulation" technique, the light valve is illuminated with a constant brightness light and the four bi-level pictures are displayed for periods of time having the ratios 8:4:2:1, respectively. In the "light intensity modulation" technique, the four bi-level pictures are each displayed for equal amounts of time, but the light valve is illuminated with light having brightness levels in the ratio 8:4:2:1, respectively, for each bi-level picture.

With reference to Figure 19, the *Matsui* reference describes a system utilizing both pulse width modulation and light intensity modulation in a digital gradation display system. As described in the paragraph beginning at column 18, line 50, the light valve is illuminated at full brightness, and the first bi-level picture is displayed for a time period twice as long as the second bi-level picture. The third bi-level picture is then displayed for the same time period as the second picture, but the light valve is illuminated at a one-half the brightness used for the first and second pictures. The fourth bi-level picture is then displayed for the same time period as the

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second and third pictures, but with only one-quarter the illumination brightness used for the first and second pictures. In this way, brightness levels in the ratio 8:4:2:1 are created, respectively, for each bi-level picture.

The Applicants respectfully draw the Examiner's attention to the fact that this variation of illumination brightness from full, to one-half, to one-quarter, is repeated in every frame, regardless of the illumination level of the picture being displayed. Instead, a desired illumination level for a picture is obtained by varying the on-off status of the pixels in the bi-level pictures. Where the highest illumination level is desired, pixels are in the "on" state in all of the bi-level pictures. Where the lowest (non-black) illumination level is desired, pixels are in the "on" state in only the fourth bi-level picture. Importantly, though, the *Matsui* reference teaches that the reduction of illumination brightness for the third and fourth bi-level pictures occurs in every frame, regardless of the illumination level of the pictured being displayed.

In contrast, Claim 1, as amended to include the limitations previously recited in Claim 8, recites a display device illuminated by an illumination system comprising light-emitting diodes, wherein the intensity of light emitted by the light-emitting diodes varies in response to an illumination level of a picture to be displayed by the display device. As a result, the *Matsui* reference fails to show each and every limitation of the Applicants' invention, as recited in amended Claim 1.

For these reasons, the Applicants submit that Claim 1, as amended to recite the limitations previously recited in Claim 8, is patentable over the *Matsui* reference. Independent Claims 13 and 14 had been amended to recite analogous limitations and are, therefore, also patentable over the *Matsui* reference. Claims 2-4, 9 and 10, which depend from Claim 1, and Claim 18, which depends from Claim 13, include the limitations of their respective base claims

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and are, therefore, also patentable over the *Matsui* reference. The Applicants respectfully submit that these amendments place the claims in better condition for allowance or appeal. Furthermore, because the amendments consist of limitations previously recited in a claim under examination, the amendments do not require a new search.

Accordingly, the Applicants respectfully request that the Examiner withdraw the rejection of Claims 1-4, 9, 10, 13, 14 and 18 under 35 U.S.C. § 102(e) and that Claims 1-4, 9, 10, 13, 14 and 18, as amended, be passed to allowance.

IV. 35 U.S.C. § 103 – Obviousness

In Sections 7-11 of the February 23, 2005, Office Action, the Examiner rejected Claims 6, 7, 11, 12, 15-17, 19 and 20 under 35 U.S.C. § 103(a). Claims 6 and 7 were rejected as unpatentable over *Matsui* in view of United States Patent No. 5,044,709 to Smith, *et al.* ("*Smith*"). Claims 11 and 12 were rejected as unpatentable over *Matsui* in view of United States Patent No. 3,940,756 to Findlay ("*Findlay*"). Claims 15-17, 19 and 20 were rejected as unpatentable over *Matsui* in view of European Patent Application No. 0 984 314 to Yamazaki ("*Yamazaki*").

As discussed with regard to amended independent Claim 1, the *Matsui* reference does not describe a display device illuminated by an illumination system comprising light-emitting diodes, wherein the intensity of light emitted by the light-emitting diodes varies in response to an illumination level of a picture to be displayed by the display device. The Applicants respectfully submit that neither the *Smith* reference, the *Findlay* reference, nor the *Yamazaki* reference overcomes the shortcomings of the *Matsui* reference. Claims 6, 7, 11, 12, 15-17, which depend from Claim 1, and Claims 19 and 20, which depend from independent Claim 14, include the

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limitations of their respective base claims. Claims 6, 7, 11, 12, 15-17, 19 and 20 are, therefore, also patentable over the *Matsui* reference, in combination with the *Smith* reference, the *Findlay* reference, or the *Yamazaki* reference.

Accordingly, the Applicants respectfully request that the Examiner withdraw the rejection of Claims 6, 7, 11, 12, 15-17, 19 and 20 under 35 U.S.C. § 103(a) and that Claims 6, 7, 11, 12, 15-17, 19 and 20, as amended, be passed to allowance.

V. Allowable Subject Matter

The Applicants thank the Examiner for the indication that Claim 5 would be allowable if rewritten in independent form. However, because the Applicants believe that Claim 5 depends from an allowable base claim, as described above, the Applicants have not rewritten Claim 5 in independent form.

VI. Conclusion

The Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. The Applicants reserve the right to submit further arguments in support of their above stated position, as well as the right to introduce relevant secondary considerations including long-felt but unresolved needs in the industry, failed attempts by others to invention the invention, and the like, should that become necessary.

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SUMMARY


For the reasons given above, the Applicants respectfully request reconsideration and allowance of pending claims and that this application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

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